

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference CFO17633WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP 03 / 13177	International filing date (day/month/year) 15.10.2003	Priority date (day/month/year) 16.10.2002
International Patent Classification (IPC) or national classification and IPC Int.Cl. ⁷ H01M 8/02, H01M 4/88, H01M 8/10		
Applicant CANON KABUSHIKI KAISHA		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.	
3. This report is also accompanied by ANNEXES, comprising:	
a. <input type="checkbox"/> a total of _____ sheets, as follows:	
<input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).	
<input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.	
b. <input type="checkbox"/> a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4. This report contains indications relating to the following items:	
<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 21.04.2004	Date of completion of this report 14.01.2005
Name and mailing address of the IPEA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer OGAWA SUSUMU Telephone No. +81-3-3581-1101 Ext. 3477

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP 03 / 13177

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished
 pages* _____ as amended (together with any statement) under Article 19
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (specify): _____
☐ any table(s) related to sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets/figs _____
☐ the sequence listing (specify): _____
☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-3, 5, 7-13	YES
	Claims	1, 4, 6	NO
Inventive step (IS)	Claims	none	YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims	none	NO

2. Citations and explanations (Rule 70.7)

D1: WO 00/15547 A2(SUPERIOR MICROPOWDERS LLC)2000.03.23

page57 lines10-page58 lines12,

page61 lines12-page62 lines9,

FIG.38

& US 6103393 A & JP 2003-528419 A

D2: US 6210245 B1(Sando et al.)2001.04.03

column16 lines47-column23 lines42,

FIG.1-24

& JP 11-25851 A

D3: JP 11-233006 A(CANON KABUSHIKI KAISHA)1999.08.27

[0073]-[0088],

FIG.1-12

D4: US 2002/0071980 A1(Tabata et al.)2002.06.13

whole document

& JP 2001-345110 A

The subject matter of claim 1,4,6 does not meet the requirement of novelty and does not appear to involve an inventive step in view of the D1 cited in the ISR.

D1 discloses a manufacturing process for a fuel cell comprising the step of ejecting an electrode catalyst composition containing conductive carbon by an ink-jet process on a layer-forming surface on which each electrode catalyst layer is to be formed.

The subject matter of claim 2 does not appear to involve an inventive step in view of the D1 cited in the ISR.

It is well known that a composition is ejected the same a plurality of times by the ink-jet process within the same one pixel.

The subject matter of claim 3,8-9,11-12 does not appear to involve an inventive step in view of the D1, D2 and D3 cited in the ISR.

A skilled person in the art would easily carry out applying the technical matter disclosed in D2 and D3 respectively, ejecting in a droplet quantity of from 1 pl to 100 pl per droplet to the manufacturing process for a fuel cell disclosed in D1.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: **Box No. V**

The subject matter of claim 5,10 does not appear to involve an inventive step in view of the D1 , D2 , D3 and D4 cited in the ISR.

D4 discloses a fuel cell comprising a diffusion layer between i) at least one of the fuel electrode and the oxidizer electrode and ii) the polymer electrolyte membrane , and the layer-forming surface on which each electrode catalyst layer is to be formed is at least one of the surfaces which are to face each other, of the polymer electrolyte membrane and the diffusion layer. And a skilled person in the art would easily carry out applying the manufacturing process for a fuel cell disclosed in D1 to the fuel cell disclosed in D4.

The subject matter of claim 7,13 does not appear to involve an inventive step in view of the D1 , D2 , D3 and D4 cited in the ISR.

It is well known that a fuel cell apparatus comprises a fuel cell, a housing which houses the fuel cell and an electricity-withdrawing electrode for withdrawing to the outside the electricity generated in the fuel cell.